

REMARKS

The foregoing amendments to the claims are submitted in response to the Office action in an effort to place the application in condition for allowance by adopting the Examiner's suggestion for avoiding the rejection under 35 U.S.C. 112, second paragraph, and by emphasizing certain limitations set forth in the claims which patentably distinguish over the prior art references of record applied under 35 U.S.C. 102(b) and 35 U.S.C. 103(a).

As amended, all of the original claims 1-14 overcome their rejection as being indefinite by now referring to a "process" rather than a "system", in regard to the formation of a composite structure. Withdrawal of the rejection under 35 U.S.C. 112, second paragraph is therefore expected. The dependency of claim 11 has also been correctively amended, so as to overcome the objection thereto under 37 CFR 1.75(c).

As to the rejections of the claims over the Licht and Ishikawa patents, as stated on pages 3-7 of the Office action, claims 1-14 have been amended so as to emphasize significant patentable distinctions, neither dealt with nor mentioned in the Office action. Thus, claim 1 now specifies: "--applying a barrier to an underlying substrate--; introducing a fire resisting agent to the barrier after formation thereof". Claim 13 furthermore distinguishes over the prior art applied by specifying: "said attaching of the barrier is effected in response to said--infusion into the barrier during formation of the substrate". New claims 15 and 16 emphasize the foregoing distinctions embodied in the latter quoted recitations of claims 1 and 13. Thus, claim 15 specifies: "the improvement residing in: introducing a fire resisting agent by in-situ infusion into the barrier layer after said formation thereof.; while claim 16 specifies: "--attaching the barrier layer to the substrate--without use of adhesive by formation of the substrate during said in-situ infusion of the fire resisting agent".

In regard to the rejections of claims 1-14 under 35 U.S.C. 102(b) over the Licht patent, the intumescent material sheet 11 referred to as a barrier is disclosed in such patent attached by adhesive bonding to an overlying restraining layer 12 and to an underlying elastomeric substrate layer 15 as described in column 4, lines 12-19 also referred to. The fire resisting agent referred to is a phenolic resin as described in column 2, lines 24-29 of the Licht patent. However, such phenolic resin is described as an ingredient of the already formed sheet 11, precluding its introduction by infusion after the sheet 11 is formed. Thus, the disclosure in the Licht patent is inadequate in failing to suggest or teach the distinguishing limitation of the present invention as set forth by the recitation in claim 1 as hereinbefore quoted.

In regard to the type of attachment between the barrier and its underlying substrate, to which claims 13 and 15 are limited, it is clearly excluded by the disclosure in the Licht patent wherein an adhesive type bonding is exclusively relied on for attaching the sheet 11 to its underlying substrate 15.

As to the Ishikawa patent applied to claims 3, 6, 7 and 10 under 35 U.S.C. 102(b) and 35 U.S.C. 103(a) as stated on pages 5-6 of the Office action, it is also inadequate with respect to introduction of a fire resisting agent, such as a phenolic resin, into a barrier layer after its formation in the claimed fabrication process involved. According to the disclosure in the Ishikawa patent, including column 4, lines 59-64 and column 16, lines 30-39 referred to in the Office action, a phenolic foam constitutes one of the ingredients utilized in the formation of an insulating panel 100A, which includes a non-woven fabric 104 integrated with the phenolic foam so as to preclude its infusion into such panel 100A after its formation.

In view of the inadequacies of the disclosures in the Licht and Ishikawa patents as hereinbefore referred to with respect to the critical distinctions set forth in claims 1, 13, 15 and 16, the allowance of such claims together with the other dependent claims 2-12 and 14 is in order. Favorable reconsideration is therefore requested.

Respectfully submitted,


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**VERSION WITH MARKINGS TO SHOW CHANGES MADE
IN THE CLAIMS**

Rewrite claims 1-14 as follows:

1. (Amended) A [system for protection] process of forming a composite structure [having] by applying a [substrate and a] barrier to an underlying substrate [applied thereto] during fabrication, including the steps of: introducing a fire resisting agent to the barrier after formation thereof; and attaching the barrier to the substrate before completing the fabrication of the composite structure.
2. (Amended) The [system] process as defined in claim 1, wherein said step of introducing the fire resisting agent comprises: in-situ infusion of the agent into the barrier during said fabrication of the composite structure.
3. (Amended) The [system] process as defined in claim 2, wherein said formation of the barrier [further including] includes the step of: applying a waterproofing cover skin thereto [to the barrier with] through which the fire resisting agent is infused [therein before said attaching thereof to the substrate].
4. (Amended) The [system] process as defined in claim 3, wherein said attaching of the barrier is performed by bonding thereof to the substrate.
5. (Amended) The [system] process as defined in claim 4, wherein the barrier is an intumescent mat and the fire resisting agent is a phenolic resin.

6. (Amended) The [system] process as defined in claim 3, wherein the waterproofing cover skin is aluminum foil and said bonding involves application of a silicone adhesive between the barrier and the substrate.
7. (Amended) The [system] process as defined in claim 4, wherein the barrier is felt and the fire resisting agent is an intumescent coating.
8. (Amended) The [system] process as defined in claim 4, wherein the waterproofing cover skin is aluminum foil and said bonding involves application of a silicone adhesive between the barrier and the substrate.
9. (Amended) The [system] process as defined in claim 1, wherein the barrier is an intumescent mat and the fire resisting agent is a phenolic resin.
10. (Amended) The [system] process as defined in claim 1, wherein said formation of the barrier [further including] includes the step of: applying a waterproofing cover skin thereto [to the barrier with] through which the fire resisting agent is infused [therein] before said attaching thereof to the substrate.
11. (Amended) The [system] process as defined in claim [8] 10, wherein the waterproofing cover skin is aluminum foil and said bonding involves application of a silicone adhesive between the barrier and the substrate.

12. (Amended) The [system] process as defined in claim 1, wherein said attaching of the barrier is performed by bonding thereof to the substrate by application of an adhesive between the barrier and the substrate.

13. (Amended) The [system] process as defined in claim 1, wherein said attaching of the barrier is effected in response to said introducing of the fire resisting agent by infusion into the barrier during formation of the substrate.

14. (Amended) The [system] process as defined in claim 13, wherein said substrate is formed as a solid layer underlying the barrier attached thereto.

Kindly add the following claims:

15. A process for protective fabrication of a composite structure by applying a barrier layer after formation thereof to an underlying substrate, the improvement residing in the steps of: introducing a fire resisting agent by in-situ infusion into the barrier layer after said formation thereof; and attaching the barrier layer with the fire resisting agent infused therein to the substrate before completing said fabrication of the composite structure.

16. The process as defined in claim 15, wherein said step of attaching the barrier layer to the substrate is effected without use of adhesive by formation of the substrate during said in-situ infusion of the fire resisting agent into the barrier layer.